

1    **Claims**

2    1.    A system for simultaneously receiving, processing, outputting and presenting  
3    multiple distinct signals on multiple channels to a plurality of occupants in an automobile,  
4    comprising:

5                a plurality of input ports, for simultaneously receiving a plurality of distinct  
6    signals from a plurality of sources;

7                a plurality of output ports, for simultaneously outputting each of a plurality of  
8    processed distinct signals;

9                a plurality of output devices, connected to the plurality of output ports, for  
10   simultaneously presenting at least one of a plurality of processed distinct signal to each of  
11   a plurality of occupants in an automobile;

12                a receiving unit, connected to the plurality of input ports and the plurality of  
13   output ports, further comprising:

14                an input mixer, connected to the plurality of input ports, for establishing a  
15   plurality of electrical connections between each of the plurality of sources received via  
16   the plurality of input ports and each of a plurality of channels;

17                a multi-channel receiver and amplifier unit, connected to the input mixer,  
18   for receiving and amplifying each signal present on each of the plurality of channels; and

19                an output mixer, connected to the multi-channel receiver and amplifier unit  
20   and the plurality of output ports, for establishing a second plurality of electrical  
21   connections between each of the plurality of channels and the plurality of output ports;  
22   whereupon establishing the plurality of electrical connections between the plurality of  
23   input ports and the receiving unit, and the second plurality of electrical connections  
24   between the receiving unit and the plurality of output ports, each of the plurality of  
25   occupants in the automobile may be simultaneously presented, via the plurality of output  
26   devices, with processed distinct signals.

27    2.    The system of claim 1, wherein at least one of the plurality of sources further  
28   comprises a radio frequency broadcast system, a cassette tape deck, a compact disc  
29   player, a digital versatile disc player, a video tape player, a cellular communications  
30   system, a wireless communications system, and a global positioning system.

31    3.    The system of claim 1, whereupon reception of a distinct signal in a given format  
32   on a given port of the plurality of input ports, the receiving unit configures the input  
33   mixer to establish an electrical connection between the given port and a channel  
34   configured to receive the distinct signal in the given format, and the receiving unit

1 configures the output mixer to establish an electrical connection between the channel and  
2 a given output port, wherein the given output port is configured to provide to at least one  
3 compatible output device a processed distinct signal in the given format.

4 4. The system of claim 3, wherein at least one of the distinct signals is received in at  
5 least one of an audio format, a video format, a combined audio-video format, a graphical  
6 format and a textual format.

7 5. The system of claim 4, wherein at least one of the plurality of output devices  
8 includes an audio speaker and when at least one of the distinct signals is received in an  
9 audio format, at least one output port of the plurality of output ports is electrically  
10 connected to the audio speaker.

11 6. The system of claim 4, wherein at least one of the plurality of output devices  
12 includes a television monitor and when at least one of the distinct signals is received in a  
13 combined audio-video format, the receiving unit outputs at least one of an audio signal, a  
14 video signal and a combined audio-video signal to at least one output port of the plurality  
15 of output ports configured to establish a connection with the television monitor.

16 7. The system of claim 6, wherein at least one of the plurality of output devices  
17 further includes at least one audio speaker and the receiving unit outputs the audio signal  
18 to at least one output port of the plurality of output ports configured to establish a  
19 connection with the at least one audio speaker.

20 8. The system of claim 1, wherein at least one output port of the plurality of output  
21 ports is configured to provide a processed distinct signal to at least one of the plurality of  
22 output devices via a wireless connection.

23 9. The system of claim 1, wherein at least one of the plurality of occupants is  
24 designated to receive a specific signal based upon a seating position of the occupant in the  
25 automobile.

26 10. The system of claim 1, wherein the receiving unit further comprises a multi-  
27 channel transmitter, connected to the output mixer, for transmitting electromagnetic  
28 signals to at least one output device configured to receive electromagnetic signals.

29 11. A system for simultaneously providing a first signal to at least one first occupant  
30 of a vehicle while at least one other second occupant of the vehicle receives at least one  
31 of a plurality of second signals, comprising:

32 a means for designating a first signal to provide on a first channel;

33 a means for designating which of a plurality of second signals to provide on a  
34 plurality of second channels;

1 a means for receiving and amplifying the first signal provided on the first channel;  
2 a means for receiving and amplifying each of the plurality of second signals  
3 provided on the plurality of second channels;

4 a means for designating upon which of a plurality of output ports the first signal  
5 and each of the plurality of second signals are to be provided;  
6 whereupon connection of an output device to at least one of the plurality of output  
7 ports, the output device is provided at least one of the first signal and the plurality of  
8 second signals for presentation to at least one occupant of a vehicle.

9 12. The system of claim 11, wherein the means for designating a first signal to  
10 provide on a first channel and the means for designating which of the plurality of second  
11 signals to provide on a plurality of second channels further comprise an input mixer,  
12 wherein the input mixer further comprises:

13 a plurality of input nodes, for establishing a connection with a source of each of  
14 the first signal and the plurality of second signals;

15 a plurality of output nodes associated with each of the first channel and the  
16 plurality of second channels, for connecting the output of the input mixer to the input of  
17 the means for receiving and amplifying the first signal and the means for receiving and  
18 amplifying the plurality of second signals; and

19 a configurable connecting means for establishing a connection between at least  
20 one of the plurality of input nodes and at least one of the plurality of output nodes.

21 13. The system of claim 12, wherein at least one of the first signal and the plurality of  
22 second signals comprises at least one of an audio signal, a video signal, a combined  
23 audio-video signal, a graphical signal, and a textual signal.

24 14. The system of claim 13, wherein the output device further comprises at least one  
25 of an audio speaker, a headphone, and a video monitor.

26 15. A method for providing a first signal on a first channel provided by a multi-  
27 channel receiver and amplifier to a first occupant of an automobile while a plurality of  
28 second occupants of the automobile receive at least one of a plurality of second signals on  
29 at least one second channel, comprising:

30 associating a first occupant of an automobile with a first channel;  
31 specifying a signal to provide on the first channel;  
32 associating at least one of a plurality of second occupants of the automobile with  
33 at least one second channel;  
34 specifying a second signal from a plurality of second signals to provide on the at

1       least one second channel;

2           presenting the first signal to the first occupant through the first channel;

3           presenting the second signal to the at least one of the plurality of second occupants

4       associated with the second channel;

5           determining whether a modification is desired to either a specification of an

6       occupant with a channel or a signal with a channel; and

7           if a modification is desired, re-accomplishing the above steps such that a

8       specification of an occupant with a channel or a signal with a channel is set as desired.

9       16.   The method of claim 15, wherein prior to presenting the first signal to the first

10      occupant through the first channel, the method further comprises:

11           determining whether any additional occupant or additional signal exists that needs

12      to be specified to an additional channel;

13           if any additional occupant or additional signal exists, the process further

14      comprises:

15           determining whether any additional channels are available; and

16           if additional channels are available, repeating the above steps; and

17           presenting any additional signal to any additional occupant through any additional

18      channel.

19       17.   The method of claim 16, wherein at least one of the first occupant, the plurality of

20      second occupants, and the additional occupant further comprises a grouping of at least

21      three occupants in the automobile.

22       18.   The method of claim 16, wherein at least one of the first signal, the second signal

23      and the additional signal comprises at least one of an audio signal and a video signal.

24       19.   The method of claim 15, wherein at least one of the first occupant, the plurality of

25      second occupants, and the additional occupant are identified by a location within the

26      automobile.

27       20.   The method of claim 19, wherein the location is identified as either a front seat or

28      a rear seat in the automobile.